



Louisville Metro Air Pollution Control District  
 701 West Ormsby Avenue, Suite 303  
 Louisville, Kentucky 40203-3137



## Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-1568-21-F

Plant ID: 1568

Effective Date: MM/DD/YYYY

Expiration Date: MM/DD/YYYY

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

**Source/Owner:** NHK Spring Precision of America, Inc.  
 10600 Freeport Drive  
 Louisville, KY 40258

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve months and no later than ninety days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant:	PM <sub>10</sub>	Total HAP	Single HAP
Tons/year:	<100	< 25 tpy	< 10 tpy

Application No.: See **Application and Related Documents** table.

Public Notice Date: 10/07/2021

Permit writer: Randy Schoenbaechler

Air Pollution Control Officer  
 {date1}

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### Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-1568-15-F	2/19/2015; 12/16/2015	1/19/2016	Initial	Initial FEDOOP issuance
O-1568-15-F(R1)	1/05/2019	2/27/2019	Sig.	Incorporating equipment from construction permits C-1568-1009-17-F, C-1568-1010-18-F, and removing GHGs from General Condition 10. Moved Parts Washer to Unit 4 from IA-1.
			Admin	Renaming several emission point IDs
O-1568-21-F	10/07/2021		Renewal	Scheduled renewal of permit
			Admin	Update of description and renaming of emission point IDs. Update of TAC limits per revised EAD.

### Construction Permit Summary Since Previous FEDOOP

Permit No.	Issue Date	Description
NA	NA	NA

### Application and Related Documents

Document Number	Date	Description
OB164825	8/19/2020	Correspondence about Renewal Application
OB170805	8/28/2020	Request for Renewal Application
OB176082	10/29/2021	Renewal Application
OB176108	10/29/2020	Spreadsheet for PTE and EAD
OB176070	10/29/2020	Application Correspondence

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
OB176080	10/29/2020	Spreadsheet Request
OB176100	10/30/2020	Update to EAD
OB177915	11/20/2020	Application Note
OB178003	11/23/2020	Application Corrections
OB178015	11/23/2020	Application Information
OB217100	3/16/2021	Approved Plantwide District PTE
OB222547	5/25/2021	Draft Permit for Company Review
OB226817	6/8/2021	Company Request for Copy of PTE
OB227422 OB236920 OB242644	6/11/2021 7/13/2021 7/30/2021	Review extensions and comments on draft permit
OB243839	8/5/2021	Insignificant Activities Information Request
OB258607	9/17/2021	Updated Insignificant Activities Form (AP-100P)
OB265029	10/6/2021	Updated Application forms

## Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors, published by U.S.EPA</i>
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO <sub>x</sub>	- Nitrogen oxides
PM	- Particulate Matter
PM <sub>10</sub>	- Particulate Matter less than 10 microns
PM <sub>2.5</sub>	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO <sub>2</sub>	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

## Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

## General Conditions

- G1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.
- G2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.
- G3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.
- G4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.
- G5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.
- G6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.
- G7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.
- G8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation,

termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.

- G9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.
- G10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.
- G11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
- G12. Unless specified elsewhere in this permit, the owner or operator shall submit semi-annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All compliance reports shall include the following per Regulation 2.17, section 3.5.
  - A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
  - The signature and title of a responsible official of the company.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

<b><u>Reporting Period</u></b>	<b><u>Report Due Date</u></b>
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

- G13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

<b>Regulation</b>	<b>Title</b>
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms



<b>Regulation</b>	<b>Title</b>
1.04	Performance Tests
1.05	Compliance With Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.06	Permit Requirements – Other Sources
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

G14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

<b>Regulation</b>	<b>Title</b>
1.12	Control of Nuisances

<b>Regulation</b>	<b>Title</b>
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.15	Chemical Accident Prevention Provisions
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

- G15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.
- G16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.
- G17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

***Air Pollution Control District  
701 W. Ormsby Avenue, Suite 303  
Louisville, Kentucky 40203-3137***

## Plantwide Requirements

### Facility Description

NHK Spring Precision manufactures steel valve springs and steel transmission springs from purchased steel wire that arrives at the plant in large bundles/spools.

### Applicable Regulations

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
1.05	Compliance With Emissions Standards and Maintenance Requirements	All
2.17	Federally Enforceable District Origin Operating Permits	1 through 9

<b>DISTRICT ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

## Plantwide Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. HAP

- i. The owner or operator shall not allow or cause to allow the plantwide emissions of any individual HAP to equal or exceed 10 tons during any consecutive 12-month period. [Regulation 2.17, section 5.1]
- ii. The owner or operator shall not allow or cause to allow the plantwide emissions of all HAPs combined to equal or exceed 25 tons during any consecutive 12-month period. [Regulation 2.17, section 5.1]

#### b. PM<sub>10</sub>

- i. The owner or operator shall not allow the plantwide PM<sub>10</sub> emissions to equal or exceed 100 tons per 12 consecutive month period. [Regulation 2.17, section 5.1]

#### c. TAC

- i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. [Regulations 5.00 and 5.21]
- ii. The owner or operator shall perform a new Environmental Acceptability (EA) Demonstration or de minimis determination when any of the following events occurs and submit the EA Demonstration on the schedule noted in the reporting section:<sup>1</sup>
  - (1) An application to construct or modify a process or process equipment is submitted to the District pursuant to Regulation 2.03, 2.04 or 2.05. [Regulation 5.21, section 4.22.1]
  - (2) A modification of any physical modeling parameters such as fence lines or building heights that are not otherwise subject to the requirements in this permit that affects the demonstration of compliance. [Regulation 5.21, section 4.22.2] or
  - (3) A change occurs in the process or process equipment, including raw material or fuel type substitution. [Regulation 5.21, section 4.22.3]

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<sup>1</sup> Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to perform a new Environmental Acceptability Demonstration.

- iii. When a new TAC is introduced or for any existing TAC which does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values as part of any aforementioned EA Demonstration. The form, located in Attachment C, may be used for determining BAC and *de minimis* values.  
[Regulation 5.20, sections 3 and 4]

**d. Unit Operations**

- i. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 1.05, section 5]

**S2. Monitoring and Record Keeping**

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

**a. HAP**

- i. The owner or operator shall, monthly, calculate and record the total monthly individual plantwide HAP emissions as well as the consecutive 12-month rolling total individual plantwide HAP emissions for each individual HAP.
- ii. The owner or operator shall, monthly, calculate and record the total monthly plantwide HAP emissions as well as the consecutive 12-month rolling total plantwide HAP emissions for all HAP-containing products combined.
- iii. The owner or operator shall maintain monthly records of the name, quantity, and HAP content for each HAP-containing material used during each calendar month and consecutive 12-month period.
- iv. The owner or operator shall maintain a copy of the material safety data sheets (MSDS/SDS) for each HAP-containing material used at this plant.

**b. PM<sub>10</sub>**

- i. The owner or operator shall, monthly, calculate and record the monthly and 12 consecutive month PM<sub>10</sub> emissions for each process equipment (including all chamfering machines, grinder, continuous shot peening machines, shot blast equipment, and the cooling tower) using the methods in Attachment E or other methods approved in writing by the District. For uncontrolled emissions use the same methods and remove the control efficiencies.

**c. TAC**

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to, (M)SDS, analysis of emissions, and/or modeling results.

**S3. Reporting**

[Regulation 2.17, section 5.2]

**a. HAP**

The owner or operator shall report the following information, as required by General Condition G12:

- i. The monthly and 12 consecutive month rolling totals of calculated individual plantwide HAP emissions for each month during the reporting period.
- ii. The monthly and 12 consecutive month rolling totals of calculated total plantwide HAP emissions for each month during the reporting period.

**b. PM<sub>10</sub>**

The owner or operator shall report the following information, as required by General Condition G12:

- i. The owner or operator shall report the plantwide 12-consecutive month PM<sub>10</sub> emission for each month in the report period.

**c. TAC**

The owner or operator shall report the following information, as required by the applicable deadline:

- i. The owner or operator shall submit new EA Demonstrations involving applications to construct or modify with the construction permit application. [Regulation 5.21, section 4.22.1]
- ii. The owner or operator shall submit new EA Demonstrations involving modification of any physical modeling parameter, such as fence lines or building heights, that are not otherwise subject to the permit requirements for that facility that affects the demonstration of compliance with the operating permit renewal application. [Regulation 5.21, section 4.22.2]
- iii. The owner or operator shall submit new EA Demonstrations involving a change in a process or process equipment, including raw material or fuel

type substitution before making the change.  
[Regulation 5.21, section 4.22.3]

- (1) Prior approval by the District is not required if the change does not result in emissions that exceed an EA goal, does not cause emissions of a TAC to no longer be de minimis, and a permit modification is not required. In this case, the new EA Demonstration shall be submitted within 6 months of the change.

### Plantwide Comments

- The source submitted the original and updated plantwide STAR Environmental Acceptability Demonstration documents on September 26, 2008, August 20, 2012, May 01, 2013, September 19, 2015, October 09, 2015, October 29, 2015, February 4, 2019, and October 29, 2020. The source also included a STAR EA Demo for each construction application. SCREEN3 air dispersion modeling air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. As shown in the following tables, all the cumulative and individual carcinogen risk and non-carcinogen risk values are in compliance with Goals:

Plantwide Sum	Risk	EAG
Industrial Total R <sub>C</sub>	5.20	< 38
Non-Ind. Total R <sub>C</sub>	0.49	< 3.8
Industrial Total R <sub>NC</sub> (max)	0.15	< 3.0
Non-Ind. Total R <sub>NC</sub> (max)	0.02	< 1.0

Risk value determination								
EP	Ethylbenzene R <sub>C</sub> Indus	Ethylbenzene R <sub>C</sub> Res	Ethylbenzene R <sub>NC</sub> Indus	Ethylbenzene R <sub>NC</sub> Res	Ni R <sub>C</sub> Indus	Ni R <sub>C</sub> Res	Ni R <sub>NC</sub> Indus	Ni R <sub>NC</sub> Res
C-13	0.68	0.0601	0.0003	0.00002				
E-13	0.97	0.0858	0.0004	0.00003				
A-17	0.97	0.0858	0.0004	0.00003				
F-13	0.68	0.0601	0.0003	0.00002				
G-13	0.68	0.0601	0.0003	0.00002				
H-13	0.68	0.0601	0.0003	0.00002				
SB-1					0.54	0.08	0.15	0.02

EP	Description	Modeled Throughput Capacity
C-13	Inspection machine, VICS, custom	4,200 piece/hr
E-13	Inspection machine, make VICS	6,000 piece/hr
A-17	Inspection Machine, make Morita Co.	6,000 piece/hr
F-13	Inspection machine, make VICS	4,200 piece/hr
G-13	Inspection machine, make VICS	4,200 piece/hr
H-13	Inspection machine, make VICS	4,200 piece/hr
SB-1	Shot Blaster (Dry Horning), Sinto Kogio, SJA11D, serial # 5605546001	959 lb(shot)/hr



### Emission Unit U1: Grinders, Chamfering, Continuous Shot Peening Machine, and Shot Blaster

#### Applicable Regulations

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.08	Standards of Performance for New Process Operations	1 through 3

<b>DISTRICT ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

#### Equipment

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
A-4	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # 39S39002/H3303, capacity 7,200 pieces/hr	3/6/2006	STAR* & 7.08	OS-4	S-OS-4
C-17 (A-8)	Edge Grinder, Asahi Seiki, model AGI2N, capacity 3,600 pieces/hr	11/1/2006	STAR* & 7.08	OS-6	S-OS-6
C-18 (A-9)	Edge Grinder, Asahi Seiki, model AGI2N, capacity 3,600 pieces/hr	2/1/2008	STAR* & 7.08	OS-6	S-OS-6
B-4	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # H-3346-39005, capacity 7,200 pieces/hr	2/1/2007	STAR* & 7.08	OS-4	S-OS-4
B-5A	Chamfering Machine Custom, capacity 3,600 pieces/hr	2/1/2007	STAR* & 7.08	OS-6	S-OS-6

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
B-5B	Chamfering Machine Custom, capacity 3,600 pieces/hr	2/1/2007	STAR* & 7.08	OS-6	S-OS-6
D-4	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # H-3344-39003, capacity 1,500 pieces/hr	11/1/2006	STAR* & 7.08	OS-5	S-OS-5
D-5	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # H-3345-39004, capacity 1,500 pieces/hr	2/1/2007	STAR* & 7.08	OS-5	S-OS-5
D-6	Continuous Shot Peening Machine, Itoh Kikoh, model IMD 27, serial # AT111001, capacity 959 lb(shot)/hr	4/1/2006	STAR* & 7.08	OS-6	S-OS-6
SB-1	Shot Blaster (Dry Horning), Sinto Kogio, SJA11D, serial # 5605546001, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	OS-8	S-OS-8
OS-1	Cooling Tower, Marley, model 496, capacity 12,000 gal/hr (insignificant activity)	2/1/2006	STAR* & 7.08	N/A	F
C-14	Edge Grinder, Asahi-Seiki, model AG12N, serial # 72407, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
C-15	Edge Grinder, Asahi-Seiki, model AG12N, serial # 72429, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
C-16	Edge Grinder, Asahi-Seiki, model AG12N, serial # 72254, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
A-5A	Chamfering machine, make Asahi Seiki, model AA, serial # 50882, capacity 3,600 piece/hr	2012	STAR* & 7.08	OS-6	S-OS-6
A-5B	Chamfering machine, make Asahi Seiki, model AA, serial # 50882, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
E-4	Gardner grinder, make Gardner, model 4V36T, serial # 640-1, capacity 6,000 pieces/hr	9/1/2013	STAR* & 7.08	OS-11	S-OS-11
E-5A	Chamfering machine, make Asahi Seiki, model AA, serial # 50883, capacity 3,600 pieces/hr	5/1/2014	STAR* & 7.08	OS-11	S-OS-11
E-5B	Chamfering machine, make Asahi Seiki, model AA, serial # 50883, capacity 3,600 pieces/hr	5/1/2014	STAR* & 7.08	OS-11	S-OS-11

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
F-4	Edge grinder, make Daisho Seiki, model GMV4-915, serial # H-3629-39006, capacity 7,200 pieces/hr	10/1/2014	STAR* & 7.08	OS-11	S-OS-11
G-4	Edge grinder, make Dorn, model DR660-2VE, serial # 889947BJ06,15, capacity 6,000 pieces/hr	8/1/2015	STAR* & 7.08	OS-12	S-OS-12
H-4	Edge grinder, make Dorn, model DR660-2VE, serial # 889948BJ06,15, capacity 6,000 pieces/hr	7/1/2015	STAR* & 7.08	OS-12	S-OS-12
H-5A	Chamfering machine, make Seiki, model WO110, serial # NSPA#1, capacity 1,800 pieces/hr	8/1/2016	STAR* & 7.08	OS-12	S-OS-12
I-4	Edge grinder, make Dorn, model DR660-2VE, serial # 889975BJ01,19, capacity 6,000 pieces/hr	5/1/2018	STAR* & 7.08	OS-12	S-OS-12
I-5A	Chamfering machine, make NHK, capacity 972 piece/hr	2/1/2018	STAR* & 7.08	OS-12	S-OS-12
F-5 (I-5B)	Chamfering machine, make NHK, capacity 6,600 pieces/hr	2018	STAR* & 7.08	OS-12	S-OS-12
SB-2	Shot Blaster (Dry Horning), Sinto Kogio, model SJA11D, serial # 15606529000, capacity 959 lb(shot)/hr	7/2016	STAR* & 7.08	OS-13	S-OS-13

### Control Devices

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
OS-4	Donaldson Torit, Cartridge Collector, model DFT4-48, serial # 2005792-1 with HEPA filter	95% + 99%
OS-5	Donaldson Torit, Cartridge Collector, model DFT4-48, serial # 2005792-1 with HEPA filter	95% + 99%
OS-6	Donaldson Torit, Cartridge Collector, model DFT4-48, serial # 2005792-1 with HEPA filter	95% + 99%
OS-8	Sinto Kogio, Cartridge Collector, model NCF-64U1R, serial # 05605546-D01	95%
OS-11	Cartridge Collector with HEPA filter, make Donaldson, model DFT4-48, serial # 4221524-1	95% + 99%
OS-12	Cartridge Collector with HEPA filter, make UAS, model SCR 48-4, serial # 60071185	95% + 99%

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
OS-13	Donaldson Torit Cartridge Collector model DFE 3-6, serial # 10829072-L1-1, installed 7/1/2016 with HEPA filter, make Donaldson Torit, model DFE 3-6, serial # 10829072-L1-1	95% + 99%

## U1 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. HAP

- i. See Plantwide Requirements.

#### b. Opacity

- i. The owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

#### c. PM/PM<sub>10</sub>

- i. See Plantwide Requirements.
- ii. The owner or operator shall not allow PM emissions to exceed the following limits based on actual operating hours in a calendar day.  
[Regulation 7.08, section 3.1.2]

Emission Point ID <sup>2</sup>	Emission Limit (lb/hr)
(A-4) Edge Grinder	2.34 (Construction Permit 342-05-C)
(D-6) Continuous Shot Peening Machine	3.12 (Construction Permit 335-06-C)
(B-4) Grinder	2.34 (Construction Permit C-1568-1008-15-F)
(D-4) Grinder	2.34 (Construction Permit C-1568-1008-15-F)
(D-5) Grinder	2.34 (Construction Permit C-1568-1008-15-F)
(C-17) Grinder	2.34 (Construction Permit C-1568-1008-15-F)
(C-18) Grinder	2.34 (Construction Permit C-1568-1008-15-F)
(B-5A) Chamfering Machines	2.34 (Construction Permit C-1568-1008-15-F)
(B-5B) Chamfering Machines	2.34 (Construction Permit C-1568-1008-15-F)
(SB-1) Shot Blaster	2.34 (Construction Permit 344-05-C)
(C-14) Edge Grinder	2.34 (Construction Permit 35474-12-C(R1))
(C-15) Edge Grinder	2.34 (Construction Permit 35941-12-C(R1))
(C-16) Edge Grinder	2.34 (Construction Permit 35941-12-C(R1))
(OS-1) Cooling Tower	2.34
(A-5A) Chamfering machine	2.34 (Construction Permit C-1568-1007-15-F)

<sup>2</sup> The lb/hr standards cannot be exceeded controlled for A-4, B-4, D-4, D-5, C-17, C-18, B-5A, B-5B, SB-1, C-14, C-15, C-16, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, I-4, F-5, and SB-2; therefore, monitoring and record keeping is required. The lb/hr standards cannot be exceeded uncontrolled for D-6, OS-1, H-5A, and I-5A.

<b>Emission Point ID<sup>2</sup></b>	<b>Emission Limit (lb/hr)</b>
(A-5B) Chamfering machine	2.34 (Construction Permit C-1568-1007-15-F)
(E-4) Gardner Grinder	2.34 (Construction Permit C-1568-1007-15-F)
(E-5A) Chamfering machine	2.34 (Construction Permit C-1568-1007-15-F)
(E-5B) Chamfering machine	2.34 (Construction Permit C-1568-1007-15-F)
(F-4) Edge Grinder	2.34 (Construction Permit C-1568-1007-15-F)
(G-4) Edge Grinder	2.34 (Construction Permit C-1568-1007-15-F)
(H-4) Edge Grinder	2.34 (Construction Permit C-1568-1007-15-F)
(H-5A) Chamfering Machines	2.34 (Construction Permit C-1568-1009-17-F)
(I-4) Edge Grinder	2.34 (Construction Permit C-1568-1010-18-F)
(I-5A) Chamfering Machine	2.34 (Construction Permit C-1568-1010-18-F)
(F-5) Chamfering Machine	2.34 (Construction Permit C-1568-1010-18-F)
(SB-2) Shot Blaster	2.34 (Construction Permit C-1568-1009-17-F)

- iii. The owner or operator shall not allow the pressure drop to fall outside of the ranges listed below for each dust collector: [Regulation 2.17, section 5.1]

<b>Dust Collector</b>	<b>Range</b>
OS-4	0.2 to 10
OS-5	0.2 to 10
OS-6	0.2 to 10
OS-8	0.2 to 10
OS-11	0.2 to 10
OS-12	0.2 to 10
OS-13	0.2 to 10

- iv. For A-4, B-4, D-4, D-5, C-17, C-18, B-5A, B-5B, SB-1, C-14, C-15, C-16, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, I-4, F-5, and SB-2, at all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions to meet the standards. [Regulation 2.17, section 5.1]

**d. TAC**

- i. See Plantwide Requirements.

- ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards listed in the following table.<sup>3,4,5</sup>  
[Regulation 5.21, section 4.3]

Emission Point	Description	TAC Emission Limits			
		Chromium III (16065-83-1)	Copper (7440-50-8)	Nickel (7440-02-0)	Manganese (7439-96-5)
A-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
B-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
D-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
D-5	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
C-17 (A-8)	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
C-18 (A-9)	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
C-14	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
C-15	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
C-16	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
B-5A	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
B-5B	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
D-6	Continuous Shot Peening	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
SB-1	Shot Blaster	<i>De Minimis</i>		4.54 lb/12 consecutive months	<i>De Minimis</i>
A-5A	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
A-5B	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
E-4	Garden Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
E-5A	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
E-5B	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
F-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
G-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
H-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
H-5A	Chamfering	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>
I-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>

<sup>3</sup> When *de minimis* limits apply they include a lb/hr value and a lb/averaging period value. See Attachment D for *de minimis* values. TAC emissions subject to *de minimis* standards should be met for all applicable averaging periods.

<sup>4</sup> If the controlled PTE for a TAC was determined to be greater than *de minimis*, in the EA demonstrations submitted by the company and was modeled to calculate risk for comparison to the EA Goals then the modeled emission rate was used as the basis of permit limits.

<sup>5</sup> Limits for modeled emissions are given in terms of the averaging period of the individual TAC.

Emission Point	Description	TAC Emission Limits			
		Chromium III (16065-83-1)	Copper (7440- 50-8)	Nickel (7440- 02-0)	Manganese (7439-96-5)
I-5A	Chamfering Machine			<i>De Minimis</i>	<i>De Minimis</i>
F-5 (I-5B)	Chamfering Machine	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
SB-2	Shot Blaster	<i>De Minimis</i>		<i>De Minimis</i>	<i>De Minimis</i>

- iii. For A-4, B-4, D-4, D-5, C-17, C-18, C-14, C-15, C-16, B-5A, B-5B, D-6, SB-1, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, H-5A, I-4, I-5A, F-5, and SB-2 at all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions to meet the standards.<sup>6</sup> [Regulation 5.21, section 4.3]

## S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

### a. HAP

- i. See Plantwide Requirements.

### b. Opacity

- i. For all emission points: The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The visible emissions surveys may be performed on the building exhaust points if the process is inside an enclosure.
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Attachment A, within 24 hours of the initial observation.

<sup>6</sup> Control devices for this unit are required to be operated at all times in order to comply with the TAC emission limits established per Regulation 5.00 and 5.21.



- iii. The owner or operator shall, monthly, maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

**c. PM/PM<sub>10</sub>**

- i. See Plantwide Requirements.
- ii. The owner or operator shall, daily, monitor and record the pressure drop in inches water column of each dust collector (OS-4, OS-5, OS-6, OS-8, OS-11, OS-12, and OS-13). If the values of the gauges are outside of the range for the dust collector, the control efficiency of the dust collector will be considered zero in the PM and PM<sub>10</sub> emission calculations for the period of time the values of the gauges are outside of the range for the dust collector.
- iii. The owner or operator shall, daily, keep a record of the number and type of springs that are ground by each grinding and chamfering machine that calendar day.
- iv. For A-4, B-4, D-4, D-5, C-17, C-18, B-5A, B-5B, SB-1, C-14, C-15, C-16, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, I-4, F-5, and SB-2; if there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
  - (1) Date;
  - (2) Start time and stop time;
  - (3) Identification of the control device and process equipment;
  - (4) PM emissions for each hour during the event in lb/hr;
  - (5) Summary of the cause or reason for each event;
  - (6) Corrective action taken to minimize the extent or duration of the event; and
  - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
  - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

**d. TAC**

- i. See Plantwide Requirements.

- ii. For A-4, B-4, D-4, D-5, C-17, C-18, C-14, C-15, C-16, B-5A, B-5B, D-6, SB-1, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, H-5A, I-4, I-5A, F-5, and SB-2, if there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
  - (1) Date;
  - (2) Start time and stop time;
  - (3) Identification of the control device and process equipment;
  - (4) Each TAC emission during the event in lb/hr and lb/averaging period;
  - (5) Summary of the cause or reason for each event;
  - (6) Corrective action taken to minimize the extent or duration of the event; and
  - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
  - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

### **S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following:

#### **a. HAP**

- i. See Plantwide Requirements.

#### **b. Opacity**

- i. In the semi-annual report include the following information:
  - (1) Emission Unit number and Emission Point number for each exceedance;
  - (2) The beginning and ending date of the reporting period;
  - (3) The number of surveys where visible emissions were observed;
  - (4) The date, time, and results of each Method 9 that exceeded the opacity standard; and
  - (5) Description of any corrective action taken for each exceedance.

#### **c. PM/PM<sub>10</sub>**

- i. See Plantwide Requirements.

- ii. For A-4, B-4, D-4, D-5, C-17, C-18, B-5A, B-5B, SB-1, C-14, C-15, C-16, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, I-4, F-5, and SB-2 the owner or operator shall clearly identify all deviations from permit requirements in the semi-annual report and include the following information:
  - (1) Emission unit ID number and emission point ID number;
  - (2) Identification of all times any control device was not in operation when associated emission units were operating;
  - (3) Identification of all times any control device exceeds the pressure drop range;
  - (4) Calculated lb/hr PM emissions during the bypass event;
  - (5) Reason for excess emissions; and
  - (6) Description of corrective action taken to prevent future exceedances.
  - (7) A negative declaration if no deviations occur during the reporting period.

**d. TAC**

- i. See Plantwide Requirements.
- ii. For A-4, B-4, D-4, D-5, C-17, C-18, C-14, C-15, C-16, B-5A, B-5B, D-6, SB-1, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, H-5A, I-4, I-5A, F-5, and SB-2, the owner or operator shall clearly identify all deviations from permit requirements in the semi-annual report and include the following information:
  - (1) Emission unit ID number and emission point ID number;
  - (2) Identification of all times the control device is not in operation and exceeded any lb/hr or lb/averaging period TAC limit;
  - (3) Calculated lb/hr and lb/averaging period for each TAC emission during the event;
  - (4) Reason for excess emissions; and
  - (5) Description of corrective action taken to prevent future exceedances.
  - (6) A negative declaration if no deviations occur during the reporting period.

**Emission Unit U2: Shot Peening Machines****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.08	Standards of Performance for New Process Operations	1 through 3

<b>DISTRICT ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID<sup>7</sup></b>
A-10	Shot Peening Machine, Sinto Kogio, model SNB-50W with Internal Cartridge Collector, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	A-11	S-A-11
A-12	Shot Peening Machine, Sinto Kogio, model SNB-30 with Internal Cartridge Collector, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	A-13	S-A-13
B-6	Shot Peening Machine, Sinto-Kogio, model SNB-50W with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2007	STAR* & 7.08	B-7	S-B-7

<sup>7</sup> These release points exhaust inside the building.

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID<sup>7</sup></b>
B-8	Shot Peening Machine, Sinto-Kogio, model SNB-30 with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2007	STAR* & 7.08	B-9	S-B-9
SB-3	Shot Peening Machine, Sinto-Kogio, model IMR-200 with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2008	STAR* & 7.08	SB-5	S-SB-5
GCN-Preshot-1	Pre-shot Peening Machine, Sinto Kogio, model SNB-30Y with Internal Cartridge Collector, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	GCN-Preshot-DC1	S-GCN-Preshot-DC1
GCN-Preshot-2	Pre-shot Peening Machine, Sinto Kogio, model SNB-30Y with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2018	STAR* & 7.08	GCN-Preshot-DC2	S-GCN-Preshot-DC2
E-6	Shot peening machine, make Sinto Kogio, model SNB 30W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	10/1/2013	STAR* & 7.08	E-7	S-E-7
E-8	Shot peening machine, make Sinto Kogio, model SNB 50W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	10/1/2013	STAR* & 7.08	E-9	S-E-9
F-6	Shot peening machine, make Sinto Kogio, model SNB 30W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	4/1/2015	STAR* & 7.08	F-7	S-F-7
F-8	Shot peening machine, make Sinto Kogio, model SNB 50W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	4/1/2015	STAR* & 7.08	F-9	S-F-9

### Control Devices

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
A-11	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
A-13	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
B-7	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
B-9	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
SB-5	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
GCN-Preshot-DC1	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
GCN-Preshot-DC2	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
E-7	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%
E-9	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%
F-7	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%
F-9	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%

### U2 Specific Conditions

**S1. Standards**

[Regulation 2.17, section 5.1]

**a. HAP**

i. See Plantwide Requirements.

**b. Opacity**

i. The owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

**c. PM/PM<sub>10</sub>**

i. See Plantwide Requirements.

ii. The owner or operator shall not allow PM emissions to exceed the following limits based on actual operating hours in a calendar day. [Regulation 7.08, section 3.1.2]

<b>Emission Process ID<sup>8</sup></b>	<b>Emission Limit (lb/hr)</b>
(B-6) Shot Peening Machine	2.34 (Construction Permit C-1568-1008-15-F)
(B-8) Shot Peening Machine	2.34 (Construction Permit C-1568-1008-15-F)
(SB-3) Shot Peening Machine	2.34 (Construction Permit C-1568-1008-15-F)
(GCN-Preshot-1) Pre-shot Peening Machine	4.80 (Construction Permit 335-06-C)
(GCN-Preshot-2) Pre-shot Peening Machine	2.34 (Construction Permit C-1568-1010-18-F)
(A-10) Shot Peening Machine	2.34 (Construction Permit 346-05-C)
(A-12) Shot Peening Machine	2.34 (Construction Permit 346-05-C)
(E-6) Shot Peening Machine	2.34 (Construction Permit C-1568-1007-15-F)
(E-8) Shot Peening Machine	2.34 (Construction Permit C-1568-1007-15-F)
(F-6) Shot Peening Machine	2.34 (Construction Permit C-1568-1007-15-F)
(F-8) Shot Peening Machine	2.34 (Construction Permit C-1568-1007-15-F)

iii. For A-10, A-12, B-6, B-8, SB-3, E-6, E-8, F-6, F-8, and GCN-Preshot-2, at all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the affected facility including associated air pollution control equipment in a

<sup>8</sup> The lb/hr standards cannot be exceeded controlled for A-10, A-12, B-6, B-8, SB-3, E-6, E-8, F-6, F-8, and GCN-Preshot-2; therefore, monitoring and record keeping is required. The lb/hr standards cannot be exceeded uncontrolled for GCN-Preshot-1.

manner consistent with good air pollution control practice for minimizing emissions to meet the standards. [Regulation 2.17, section 5.1]

**d. TAC**

- i. See Plantwide Requirements.
- ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards listed in the following table.<sup>9,10,11</sup>  
[Regulation 5.21, section 4.3]

Emission Point	Description	TAC Emission Limits pound per 12 consecutive month period or de minimis		
		Chromium III (16065-83-1)	Nickel (7440-02-0)	Manganese (7439-96-5)
A-10	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
A-12	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
B-6	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
B-8	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
SB-3	Shot Peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
GCN-Preshot-1	Pre-Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
GCN-Preshot-2	Pre-Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
E-6	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
E-8	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
F-6	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
F-8	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>

- iii. A-10, A-12, B-6, B-8, SB-3, GCN-Preshot-1, GCN-Preshot-2, E-6, E-8, F-6, and F-8 at all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice

<sup>9</sup> When *de minimis* limits apply they include a lb/hr value and a lb/averaging period value. See Attachment D for *de minimis* values.

<sup>10</sup> If the controlled PTE for a TAC was determined to be greater than *de minimis*, in the EA demonstrations submitted by the company and was modeled to calculate risk for comparison to the EA Goals then the modeled emission rate was used as the basis of permit limits.

<sup>11</sup> Limits for modeled emissions are given in terms of the averaging period of the individual TAC.



for minimizing emissions to meet the standards.<sup>12</sup> [Regulations 5.21, section 4.3]

**S2. Monitoring and Record Keeping**  
[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

**a. HAP**

- i. See Plantwide Requirements.

**b. Opacity**

- i. For all emission points: The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The visible emissions surveys may be performed on the building exhaust points if the process is inside an enclosure.
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Attachment A, within 24 hours of the initial observation.
- iii. The owner or operator shall, monthly, maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

**c. PM/PM<sub>10</sub>**

- i. See Plantwide Requirements.
- ii. For control devices (A-11, A-13, B-7, B-9, SB-5, GCN-Preshot-DC1, GCN-Preshot-DC2, E-7, E-9, F-7, and F-9): The owner or operator shall, monthly, perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as

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<sup>12</sup> Control devices for this unit are required to be operated at all times in order to comply with the TAC emission limits established per Regulation 5.00 and 5.21.

needed. The owner or operator shall, monthly, maintain records of the results.

- iii. For A-10, A-12, B-6, B-8, SB-3, E-6, E-8, F-6, F-8, and GCN-Preshot-2 if there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
  - (1) Date;
  - (2) Start time and stop time;
  - (3) Identification of the control device and process equipment;
  - (4) PM emissions for each hour during the event in lb/hr;
  - (5) Summary of the cause or reason for each event;
  - (6) Corrective action taken to minimize the extent or duration of the event; and
  - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
  - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

**d. TAC**

- i. See Plantwide Requirements.
- ii. For all emission points if there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
  - (1) Date;
  - (2) Start time and stop time;
  - (3) Identification of the control device and process equipment;
  - (4) Each TAC emission during the event in lb/hr and lb/averaging period;
  - (5) Summary of the cause or reason for each event;
  - (6) Corrective action taken to minimize the extent or duration of the event; and
  - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
  - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

**S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information:

**a. HAP**

- i. See Plantwide Requirements.

**b. Opacity**

- i. In the semi-annual report include the following information:
  - (1) Emission Unit number and Emission Point number for each exceedance;
  - (2) The beginning and ending date of the reporting period;
  - (3) The number of surveys where visible emissions were observed;
  - (4) The date, time, and results of each Method 9 that exceeded the opacity standard; and
  - (5) Description of any corrective action taken for each exceedance.

**c. PM/PM<sub>10</sub>**

- i. See Plantwide Requirements.
- ii. The owner or operator shall report any deviations from the requirement of performing visual inspection of the structural and mechanical integrity of the control devices (A-11, A-13, B-7, B-9, SB-5, GCN-Preshot-DC1, GCN-Preshot-DC2, E-7, E-9, F-7, and F-9) in the semi-annual report and include the following information:
  - (1) Emission unit ID number and emission point ID number;
  - (2) The date, time, and the description of repair and/or replace defective components;
  - (3) A negative declaration if no deviations occur during the reporting period.
- iii. The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual report and include the following information regarding bypass events for control devices (A-11, A-13, B-7, B-9, SB-5, GCN-Preshot-DC2, E-7, E-9, F-7, and F-9):
  - (1) Emission unit ID number and emission point ID number;
  - (2) Identification of all times any control device is not in operation;
  - (3) Calculated lb/hr PM emissions during the bypass event;

- (4) Reason for excess emissions; and
- (5) Description of corrective action taken to prevent future exceedances.
- (6) A negative declaration if no deviations occur during the reporting period.

**d. TAC**

- i. See Plantwide Requirements.
- ii. For all emission points the owner or operator shall clearly identify all deviations from permit requirements in the semi-annual report and include the following information:
  - (1) Emission unit ID number and emission point ID number;
  - (2) Identification of all times the control device is not in operation and exceeded any lb/hr or lb/averaging period TAC limit;
  - (3) Calculated lb/hr and lb/averaging period for each TAC emission during the event;
  - (4) Reason for excess emissions; and
  - (5) Description of corrective action taken to prevent future exceedances.
  - (6) A negative declaration if no deviations occur during the reporting period.

### Emission Unit U3: Anti-Corrosion Coating and Paint/Ink Marking Operation

#### Applicable Regulations

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.08	Standards of Performance for New Process Operations	1 through 3
7.59	Standard of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	All

<b>DISTRICT ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

#### Equipment

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
A-17	Inspection Machine, make Morita Co., capacity 6,000 piece/hr	10/1/2006	STAR*, 7.08 & 7.59	A-18	S-A-18
E-13	Inspection machine, make NHK custom, model VICS, capacity 6,000 piece/hr	7/1/2013	STAR*, 7.08 & 7.59	E-14	S-E-14
AS-2	Loss Motion Assembly - Paint Dauber, make Morita Co., capacity 1,800 piece/hr	2/1/2008	STAR* & 7.59	N/A	N/A
F-13	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	8/1/2014	STAR*, 7.08 & 7.59	F-14	S-F-14

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
G-13	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	9/1/2015	STAR*, 7.08 & 7.59	G-14	S-G-14
H-13	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	8/1/2016	STAR*, 7.08 & 7.59	H-13CD	S-H-13CD
H-14	Inspection machine, Mishima Space Pad, model Space Shot Cam, capacity 300 piece/hr	8/2016	STAR* & 7.59	N/A	N/A
C-13 <sup>13</sup>	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	1/2017	STAR*, 7.08 & 7.59	C-13CD	S-C-13CD
H-15 <sup>14</sup>	Inspection machine, Mishima Space Pad, model Space Shot Cam, capacity 300 piece/hr	7/1/2017	STAR* & 7.59	N/A	F
H-16	Inspection machine, NHK custom, capacity 650 piece/hr	12/1/2017	STAR* & 7.59	N/A	F
H-18	Inspection machine, NHK custom, capacity 300 piece/hr	7/1/2017	STAR* & 7.59	N/A	F
H-19	Inspection machine, NHK custom, capacity 650 piece/hr	12/2018	STAR* & 7.59	N/A	F

### Control Devices

Control ID	Description	Control Efficiency <sup>15</sup>
A-18	filter	N/A
E-14	filter	N/A
F-14	filter	N/A
G-14	filter	N/A
H-13CD	filter	N/A
C-13CD	filter	N/A

<sup>13</sup> C-13 was labeled as I-13 and filter C-13CD was I-14 in construction permit C-1568-1009-17-F.

<sup>14</sup> Equipment AS-2, H-14, H-15, H-16, H-18, and H-19 is not subject to Regulation 7.08, as the coating is not sprayed on to parts, it is daubed on.

<sup>15</sup> The HEPA filter efficiencies associated with the Inspection Machines are not claimed by the company in emission calculations and are therefore, not considered to be applicable by the District and no monitoring or record keeping of performance indicators is required.

**U3 Specific Conditions**

**S1. Standards**

[Regulation 2.17, section 5.1]

**a. HAP**

i. See Plantwide Requirements.

**b. Opacity**

i. The owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

**c. PM/PM<sub>10</sub>**

i. See Plantwide Requirements.

ii. For A-17, E-13, F-13, G-13, H-13, and C-13 the owner or operator shall not allow PM emissions to exceed 2.34 lb/hr for each piece of equipment based on actual operating hours in a calendar day.<sup>16</sup> [Regulation 7.08, section 3.1.2]

**d. TAC**

i. See Plantwide Requirements.<sup>17</sup>

**e. VOC**

i. The owner or operator shall not allow or cause VOC emissions, including all coatings, additives, catalysts, solvents, thinners, and cleaners from this plant to exceed 5 tons during any during any 12 consecutive month period. [Regulation 7.59, section 5.2]

Or

ii. No coating shall be used with a VOC content, as applied, in excess of the following limits during a calendar day averaging period: [Regulation 7.59, section 3.1]

Coating	VOC lb/gal	VOC kg/l
Clear coatings	4.3	0.52

<sup>16</sup> PM emissions cannot exceed lb/hr standards uncontrolled. Therefore, there are no requirements for monitoring, recordkeeping and reporting for PM emission

<sup>17</sup> The non-*de minimis* emission points C-13, A-17, E-13, F-13, G-13, and H-13 were modeled for Ethylbenzene at uncontrolled potential to emit for applicable TACs and is environmentally acceptable according to the STAR Demonstration.

Coating	VOC lb/gal	VOC kg/l
Air-dried coatings	3.5	0.42
Extreme performance coatings	3.5	0.42
All other coatings	3.0	0.36

## S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

### a. HAP

- i. See Plantwide Requirements.

### b. Opacity

- i. There are no monitoring or record keeping requirements for this pollutant for this equipment<sup>18</sup>

### c. PM/PM<sub>10</sub>

- i. See Plantwide Requirements.
- ii. For A-17, E-13, AS-2, F-13, G-13, H-13, H-14, and C-13 the owner or operator shall, monthly, record the total amount used in gallons of each coating.

### d. TAC

- i. See Plantwide Requirements.

### e. VOC

- i. The owner or operator shall, monthly, record the total amount used in gallons of each coating, solvent, cleaner, etc, when non-compliant coatings are used that calendar month.
- ii. The owner or operator shall, monthly, calculate and record the monthly and consecutive 12-month total VOC emissions each calendar month to demonstrate compliance with the five (5) ton per 12 consecutive month period limit when non-compliant coatings are used.

Or

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<sup>18</sup> The District has determined that no periodic visible emissions surveys are required for this equipment.



- iii. An owner or operator of an affected facility subject to this regulation shall, daily, maintain records that include, but not be limited to, the following: (Regulation 7.59, section 6.1)
  - (1) The regulation and section number applicable to the affected facility for which the records are being maintained,
  - (2) The application method and substrate type (metal, plastic, etc.),
  - (3) The amount and type of coatings (including catalyst and reducer for multi-component coatings) and solvent (including exempt compounds) used at each point of application during the day.
  - (4) The VOC content as applied in each coating and solvent,
  - (5) The date, or usage record period, for each application of coating and solvent,
  - (6) The amount of surface preparation, clean up, wash-up of solvent (including exempt compounds) used and the VOC content of each material used during the day.
- iv. The VOC content shall be calculated using a percent solids basis (excluding water and exempt solvents) for coatings using EPA Method 24. [Regulation 7.59, section 6.2]

### **S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information:

**a. HAP**

- i. See Plantwide Requirements.

**b. Opacity**

- i. There are no reporting requirements for this pollutant for this emission unit.

**c. PM/PM<sub>10</sub>**

- i. See Plantwide Requirements.

**d. TAC**

- i. See Plantwide Requirements.

**e. VOC**

- i. If the source is showing compliance with the less than 5 tons per 12 consecutive month period standard: The owner or operator shall identify all

periods of exceeding the VOC standard during a reporting period in the semi-annual report including:

- (1) The Emission unit ID numbers and emission process ID numbers;
- (2) The total plantwide 12 consecutive month VOC emissions from the coating operation for each month in the reporting period when non-compliant coatings are used;
- (3) A description of corrective actions taken for each exceedance.

ii. If the source is showing compliance with the lb/gal as applied standard: The owner or operator shall identify all periods of exceeding the VOC standard during a reporting period in the semi-annual report including:

- (1) The emission unit ID numbers and emission process ID numbers;
- (2) Identification of all periods when compliant coatings were used and VOC emissions from the coating operations that exceeded the lb/gal as applied limit for any rolling 12-month period in the prior 12 consecutive months;
- (3) A description of corrective actions taken for each exceedance.

**Emission Unit U4: Parts Washer****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4.1, 4.2

<b>DISTRICT ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
PW-1	Heritage, Crystal Clean Parts Washer no secondary reservoir	Pre-2008	STAR; 6.18	N/A	N/A

**Control Devices**

There are no control devices associated with Emission Unit 4.

## U4 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. TAC

- i. See Plantwide Requirements.<sup>19</sup>

#### b. VOC

- i. The owner or operator shall install, maintain, and operate the control equipment as follows: [Regulation 6.18, section 4]
  - (1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defects. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with 1 hand. [Regulation 6.18, section 4.1.1]
  - (2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. [Regulation 6.18, section 4.1.2]
  - (3) A permanent, conspicuous label summarizing the operating requirements specified in section 4.2 shall be installed on or near the cold cleaner. [Regulation 6.18, section 4.1.3]
  - (4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner. [Regulation 6.18, section 4.1.4]
  - (5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner. [Regulation 6.18, section 4.1.6]
  - (6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks. [Regulation 6.18, section 4.1.8]

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<sup>19</sup> The current solvent does not contain any TACs, therefore, no specific TAC emission limits are required for this emission unit.

- ii. The owner or operator shall observe at all times the following operating requirements: [Regulation 6.18, section 4.2]
  - (1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. [Regulation 6.18, section 4.2.1]
  - (2) The solvent level in the cold cleaner shall not exceed the fill line. [Regulation 6.18, section 4.2.2]
  - (3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. [Regulation 6.18, section 4.2.3]
  - (4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. [Regulation 6.18, section 4.2.4]
  - (5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. [Regulation 6.18, section 4.2.5]
  - (6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. [Regulation 6.18, section 4.2.6]
  - (7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner. [Regulation 6.18, section 4.2.7]

## **S2. Monitoring and Record Keeping**

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

### **a. TAC**

- i. See Plantwide Requirements.

### **b. VOC**

- i. The owner or operator shall maintain records that include the following for each purchase: [Regulation 6.18, section 4.4.2]

- (1) The name and address of the solvent supplier,
- (2) The date of the purchase,
- (3) The type of the solvent, and
- (4) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F).

**S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information:

**a. TAC**

- i. See Plantwide Requirements.

**b. VOC**

- i. There are no routine compliance reporting requirements for Regulation 6.18.

### Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Stress Relief Ovens	10	2.13 VOC total	Regulation 1.02
Pressurized 1000 gallon Ammonia Tank, make Mississippi Tank Co.	1	0	Regulation 1.02
GCN furnace	6	0.32 NO <sub>x</sub> ; 0.01 VOC total	Regulation 1.02
Hot Setting Machine	6	0.6 VOC total	Regulation 1.02
Spring Cleaning	1	0.14 VOC total	Regulation 1.02
Indirect- fired natural gas Space Heaters	7	0.14 NO <sub>x</sub> ; 0.02 VOC total	Regulation 1.02, Appendix A

1. Insignificant activities identified in District Regulation 1.02, Attachment A, may be subject to size or production rate disclosure requirements.
2. Insignificant activities identified in District Regulation 1.02, Attachment A shall comply with generally applicable requirements.
3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15<sup>th</sup>.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

**UIA-1 Equipment Subject to STAR only****IA-1 Applicable Regulations**

<b>DISTRICT-ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations<sup>20</sup></b>	<b>Control ID</b>	<b>Release ID</b>
TNK-1	TNK-1, 1000 gallon Ammonia Tank, make Mississippi Tank Co.	2/2006	STAR*	N/A	S-TNK
GCN-1	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-05034	2/2006	STAR*	OS-2	S-OS-2
GCN-2	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-06024	2/2007	STAR*	OS-2	S-OS-2
GCN-3	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-007030	2/2008	STAR*	OS-3	S-OS-3
GCN-4	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-13016	11/13/2013	STAR*	OS-3	S-OS-3

<sup>20</sup> The ammonia storage tanks are de minimis based on the tanks being pressurized and do not normally have any emissions. The GCN machines and the Hot setting machines are insignificant activities as defined in Regulation 1.02 therefore de minimis by definition.



<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations<sup>20</sup></b>	<b>Control ID</b>	<b>Release ID</b>
GCN-5	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-17033	2018	STAR*	OS-14	S-OS-14
GCN-6	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280	2018	STAR*	OS-14	S-OS-14

### Control Devices

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>	<b>Performance Indicator</b>
OS-2	Afterburner (Cracking Furnace) and Wet scrubber	90% of NH <sub>3</sub>	N/A
OS-3	Afterburner (Cracking Furnace) and Wet scrubber	90% of NH <sub>3</sub>	N/A
OS-14	Afterburner (Cracking Furnace) and Wet scrubber	90% of NH <sub>3</sub>	N/A

## UIA-1 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

- a. **HAP**
  - i. See Plantwide Requirements.
- b. **PM<sub>10</sub>**
  - i. See Plantwide Requirements
- c. **TAC**
  - i. See Plantwide Requirements.

### S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

- a. **HAP**
  - i. See Plantwide Requirements.
- b. **PM<sub>10</sub>**
  - i. See Plantwide Requirements.
  - ii. The owner or operator shall, monthly, record the total amount used in mmcf of natural gas combusted.
- c. **TAC**
  - i. See Plantwide Requirements.

### S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following:

- a. **HAP**
  - i. See Plantwide Requirements.
- b. **PM<sub>10</sub>**
  - i. See Plantwide Requirements.

c. **TAC**

- i. See Plantwide Requirements.

**Equipment Removed**

<b>Emission Point</b>	<b>Description</b>
B-10	Hoscoat Loading
B-11	Hoscoat
B-12	Hot Setting Machine
B-13	Inspection Machine, make Morita Co., capacity 7,200 piece/hr, installed 2/1/2007, previously controlled by filter B-14

**Equipment not Regulated**

<b>ID</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Model Number</b>	<b>Install Date</b>
A-1	Unwinder	Wafios	AHL 43 0-M	Feb-06
A-14	Hoscoat Loading	NGK Kiln Tech Corp.	H7GS-77585	Mar-06
A-15	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	Mar-06
A-2	Coiling Machine	Wafios	FUL 63	Feb-06
A-6	Free Height Check			
A-7	Free Height Check			
AS-1	Loss Motion Assembly			Nov-06
AS-3	Seat Assembly			Aug-06
AS-4	Seat Assembly			
AS-5	Seat Assembly			
B-1	Unwinder	Wafios	AHL 43 0-M	Feb-07
B-2	Coiling Machine	Wafios	FUL 63	Feb-07
Bob-1	Bob Gear - 1	NHK	Custom	Sep-17
Bob-2	Bob Gear - 2	NHK	Custom	Sep-17
Bob-3	Bob Gear - 3	NHK	Custom	Sep-17
C-10	Hoscoat Loading			Oct-07
C1-1	Unwinder	Wafios	AHL 43 0-M	Oct-07
C-11	Hoscoat			Oct-07
C1-2	Coiling Machine	Wafios	FUL 45	Oct-07
C1-8	C1 Stress Relief Furnace	Gasden Ro	TC-100Z	Feb-06
C2-1	Unwinder			
C2-8	C2 Stress Relief Furnace	Gasden Ro	TC-100Z	
C2-10	Arc Cut Wire Machine (short)			
C2-2	Coiling Machine	Wafios	FUL 45	
C2-4	Arc Forming Machine			
C2-5	Arc Forming Machine			
C2-6	Arc Forming Machine			
C2-7	Arc Forming Machine			
C2-9	Arc Cut Wire Machine (long)			
D-1	Unwinder	Wafios	AHL 430	Feb-06
D-2	Coiling Machine	Wafios	FUL 93	Feb-06
D-7	Hot Setting Furnace	NGK	H7G5-77587	Nov-06
D-8	Inspection Machine	Morita Co.	CST-03	Nov-06
E-1	Unwinder	Wafios	AHL 430	Nov-13
E-10	Hoscoat Loading	Custom	Custom	Jul-13
E-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	Jul-13
E-2	Coiling Machine	Wafios	FUL 56	Nov-13
F-1	Unwinder	Wafios	AHL 430	May-15
F-10	Hoscoat Loading	Custom	Custom	
F-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	

ID	Description	Manufacturer	Model Number	Install Date
F-2	Coiling Machine	Wafios	FUL 56	May-15
G-1	Unwinder	Wafios	AHL 430	Jun-15
G-10	Hoscoat Loading	Custom	Custom	
G-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	
G-2	Coiling Machine	Wafios	FUL 86	Jun-15
H-1	Unwinder	Wafios	AHL 430	Jun-15
H-10	Hoscoat Loading	Custom	Custom	
H-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	
H-17	Inspection Machine (Torsion 2) - No Paint	NHK	Custom	Dec-17
H-2	Coiling Machine	Wafios	FUL 56	Jun-15
H-20	Inspection Machine (Torsion 4) -No Paint	NHK	Custom	Dec-18
H-21	Stress Relief/Drying Tunnel	Gasden	TC-100Z	Jun-16
H-22	H-line Rust Inhibitor Applicator	NHK	Custom	Jun-16
H-23	Arc Spring Setting	NHK	Custom	Jul-17
H-24	Damper Spring Setting	NHK	Custom	Jun-18
I-1	Unwinder	Wafios	AHP4LM	Mar-18
I-2	Coiling Machine	Wafios	FUL 56	Mar-18
MSC-1	Cleaning Cart 1 - acetone	NA	NA	Jul-17
MSC-2	Cleaning Cart 2 - acetone	NA	NA	Jul-17
MSC-3	Man. Rust Inhibitor Applicator - 1	NA	NA	Jul-17
MSC-4	Man. Rust Inhibitor Applicator - 2	NA	NA	Jul-17
COMP-1	Compressor	Atlas Copco	GA200	
COMP-2	Compressor	Atlas Copco	GA37	
COMP-3	Compressor	Atlas Copco	GA37	
COMP-4	Air Dryer	Atlas Copco	CD520	
Maint-1	Surface Grinder	Jet	JPSG-1224A	
Maint-2	Mill	Jet		
Maint-3	Vertical Bandsaw	Jet	VBS-1610	
Maint-4	Lathe	Jet	GH-1660-ZX	
Maint-5	Drill Press	Jet	JDP-20VS-3	
Maint-6	Shear			
Maint-7	Pan Brake	Jet	BP-1248N	
Maint-8	Horizontal Bandsaw	Jet	MBS1014W-3	
Maint-9	Welder	Miller	XMT350VS	
Maint-10	Plasma Cutter	Hypertherm	Powermax1250	
Maint-11	Pipe Machine	Ridgid Tool Co.	1822-1	

<b>ID</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Model Number</b>	<b>Install Date</b>
Maint-12	Hydraulic Press	Jet	HP-35A	
TNK-2	Nitrogen Tank			
A-16	Hot Setting Machine	Morita Co	CSS3	2006
C-12	Hot Setting Machine			2007
E-12	Hot Setting Machine			2013
F-12	Hot Setting Machine			2014
G-12	Hot Setting Machine			2015
H-12	Hot Setting Machine			2016
A-3	Stress Relief Furnace, serial 8016	Gasden Ro	TC-100Z	2006
B-3	Stress Relief Furnace, serial 8130	Gasden Ro	TC-100Z	2007
C1-3	Stress Relief Furnace, serial 8465	Gasden Ro	TC-60Z	2007
D-3	Stress Relief Furnace, serial 8592	Gasden Ro	TC-120Z	2006
C2-3	Stress Relief Furnace, serial 8135-1	Gasden Ro	TC-100Z	
E-3	Stress Relief Furnace, serial 8725	Gasden Ro	TC-60Z	2013
F-3	Stress Relief Furnace, serial 8869	Gasden Ro	TC-60Z	2015
G-3	Stress Relief Furnace, serial 9173	Gasden Ro	TC-100Z	2015
H-3	Stress Relief Furnace, serial 8963	Gasden Ro	TC-60Z	2015
I-3	Stress Relief Furnace, serial 9371	Gasden Ro	TC-100Z	2018
	Maint-14			
	Lab-1 through Lab-18			
	TA-1 through TA-5			

**Fee Comment**

The company is required to pay annual fees.



### **Attachment A - General Testing Requirements**

1. Devices of adequately similar design may be represented by a common performance test contingent upon review and approval of the testing protocol by the District.
2. Before conducting a performance test, the owner or operator shall submit a written test plan (protocol). The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 calendar days prior to the actual date of the performance test. Attachment B - Protocol Checklist for a Performance Test to this permit provides information that must be submitted in the protocol.
3. The owner or operator shall be responsible for obtaining and analyzing audit samples when the EPA Reference Method is used to analyze samples, to demonstrate compliance with the source's emission regulation. The audit samples shall be available for verification by the District during the on-site testing.
4. The owner or operator shall provide the District at least 10 working days prior notice of any performance test to afford the District the opportunity to have an observer present.
5. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 calendar days following the actual date of completion of the performance test.

## Attachment B - Protocol Checklist for a Performance Test

### A complete protocol must include the following information as applicable.

1. Facility name, location, and Plant ID number.
2. Responsible Official and environmental contact names.
3. Permit numbers that are requiring the test to be conducted.
4. Test methods to be used (*i.e.* EPA Method 1, 2, 3, 4, and 5).
5. Alternative test methods or description of modifications to the test methods to be used.
6. Purpose of the test including equipment and pollutant to be tested. (The purpose may be described in the permit that requires the test to be conducted or it may be to show compliance with a federal regulation or emission standard.)
7. Tentative test dates. (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.)
8. Maximum rated production capacity of the system.
9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits) and justification of the planned production rate, if less than the maximum rate.
10. Method to be used for determining rate of production during the performance test;
11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance.
12. Description of normal operation cycles, if applicable.
13. Discussion of operating conditions that tend to cause worse case emissions. This is especially important to clarify if worst case emissions do not result from the maximum production rate.
14. Process flow diagram.
15. The type and manufacturer of the control equipment, if any.
16. The process and/or control equipment parameters to be monitored and recorded during the performance test. These parameters may include pressure drops, flow rates, pH, temperature, *etc.* The values achieved during the test may be required during subsequent operations to describe the operating parameters that are indicative of good operating performance.
17. How quality assurance and accuracy of the data will be maintained, including sample identification and chain-of-custody procedures, audit sample provider, and number of audit samples to be used, if applicable.
18. Diameter of the pipe, duct, stack, or flue to be tested.
19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet.
20. The number of traverse points to be tested for the outlet and the inlet if required, using Attachment A-1 to 40 CFR Part 60.

### **The Stack Test Review fee must be submitted with each stack test protocol.**

The current fee is listed on the APCD website ([louisvilleky.gov/APCD](http://louisvilleky.gov/APCD))

### Attachment C – Determination of Benchmark Ambient Concentration

Category \_\_\_\_\_ Number \_\_\_\_\_

Compound name \_\_\_\_\_ CAS No. \_\_\_\_\_

Molecular weight \_\_\_\_\_

BAC<sub>C</sub> = \_\_\_\_\_ μg/m<sup>3</sup>, annual  
*de minimis* \_\_\_\_\_ lb/hr; \_\_\_\_\_ lb/\_\_\_\_\_; \_\_\_\_\_ lb/year  
 BAC<sub>NC</sub> = \_\_\_\_\_ μg/m<sup>3</sup>, \_\_\_\_\_ (avg period)

**I. Carcinogen Risk - BAC<sub>C</sub>** (annual averaging period)

Carcinogen  YES  NO

1.  IRIS 10<sup>-6</sup> risk = \_\_\_\_\_ μg/m<sup>3</sup> URE = \_\_\_\_\_ (μg/m<sup>3</sup>)<sup>-1</sup> Date \_\_\_\_\_
2.  Cal 10<sup>-6</sup> risk = \_\_\_\_\_ μg/m<sup>3</sup> IUR = \_\_\_\_\_ (μg/m<sup>3</sup>)<sup>-1</sup> Date \_\_\_\_\_
3.  Mich 10<sup>-6</sup> risk = \_\_\_\_\_ μg/m<sup>3</sup> Date \_\_\_\_\_
4.  NTP Part A  YES  NO Part B  YES  NO
5.  IARC Group 1  YES  NO Group 2A  YES  NO Group 2B  YES  NO
6.  ATSDR
7.  Sec. 3.3.4 Method # \_\_\_\_\_ 10<sup>-6</sup> risk = \_\_\_\_\_ μg/m<sup>3</sup> Date \_\_\_\_\_
8.  Default 0.0004 μg/m<sup>3</sup>

**II. Chronic Noncancer Risk - BAC<sub>NC</sub>** (averaging period as specified)

1.  IRIS RfC = \_\_\_\_\_ μg/m<sup>3</sup>, annual Date \_\_\_\_\_
2.  Cal REL = \_\_\_\_\_ μg/m<sup>3</sup>, annual Date \_\_\_\_\_
3.  IRIS [1] RfD = \_\_\_\_\_ μg/kg/day × (70/20) = \_\_\_\_\_ μg/m<sup>3</sup>, annual Date \_\_\_\_\_
4.  Mich ITSL = \_\_\_\_\_ μg/m<sup>3</sup>, \_\_\_\_\_ averaging period Date \_\_\_\_\_
5.  TLV NIOSH = \_\_\_\_\_ μg/m<sup>3</sup> × 0.01 = \_\_\_\_\_ μg/m<sup>3</sup>, 8-hour Date \_\_\_\_\_
6.  RTECS [1] \_\_\_\_\_ = \_\_\_\_\_ μg/m<sup>3</sup>, annual Date \_\_\_\_\_  
 (describe calculation from Reg 5.20, sections 4.6 - 4.10)
7.  Default 0.004 μg/m<sup>3</sup>

[1] To use data based upon an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

**III. De minimis calculations**

1.  Carcinogen BAC<sub>C</sub> \_\_\_\_\_ μg/m<sup>3</sup> × 0.54 = \_\_\_\_\_ lb/hour  
 BAC<sub>C</sub> \_\_\_\_\_ μg/m<sup>3</sup> × 480 = \_\_\_\_\_ lb/year
2.  Chronic Noncancer Risk \_\_\_\_\_ (averaging period)  
 BAC<sub>NC</sub> \_\_\_\_\_ μg/m<sup>3</sup> × F factor = \_\_\_\_\_ lb/(avg period)

BAC averaging period	F factor for avg period			
	Annual	24 hour	8 hour	1 hour
Annual	480			0.54
24 hours		0.12		0.05
8 hours			0.02	0.02
1 hour				0.001

[Regulation 5.22, table 1]

Prepared by \_\_\_\_\_ Date \_\_\_\_\_

**Attachment D – De minimis TAC Values<sup>21</sup>**

TAC Name	CAS #	De minimis values		
		lb/hr	lb/averaging period	Averaging period
Ammonia	7664-41-7	54.00	48,000	Annual
Chromium III	16065-83-1	0.10	0.10	8 hr
Copper	7440-50-8	0.04	0.04	8hr
Formaldehyde	50-00-0	0.042	36.96	Annual
Naphthalene	91-20-3	0.016	13.92	Annual
Nickel	7440-02-0	0.0021	1.82	Annual
Manganese compounds	7439-96-5	0.03	24.0	Annual
Toluene	108-88-3	2,700	2,400,000	Annual
Xylene	1330-20-78	54.00	48,000	Annual
Ethyl Benzene	100-41-4	0.22	192	Annual

<sup>21</sup> BAC based De minimis values were last reviewed by the District on 01/03/2019. The District's updated BAC list with de minimis values can be found at <https://louisvilleky.gov/government/air-pollution-control-district/technical-documents-and-resources-star-regulated>.

**Attachment E - Calculation Methods and Emission Factors**

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device’s efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

**For the Grinders:**

$$PM = PM_{10} = (Springs)EF(1 - CE_{Baghouse})(1 - CE_{HEPA Filter})(0.05)$$

Where,

Process	Source	Line	EF	EF units
Grinding	Spring	A, B, F, G, H, and I	4.18E-03	lb/spring
Grinding	Wheel	A, B, F, G, H, and I	5.46E-04	lb/spring
Grinding	Spring	C	4.18E-03	lb/spring
Grinding	Wheel	C	1.28E-03	lb/spring
Grinding	Spring	D	3.52E-02	lb/spring
Grinding	Wheel	D	5.46E-04	lb/spring
Grinding	Spring	E	3.53E-03	lb/spring
Grinding	Wheel	E	5.46E-04	lb/spring

CEBagouse = 0.95 for baghouses, unless stack testing indicates a different value.

CEHEPA Filter = 0.99 for other filters, unless stack testing indicates a different value.

0.05 = Conversion of pounds to tons

$$HAP = (Springs)EF_{(Spring Only)}(1 - CE_{Baghouse})(1 - CE_{HEPA Filter})(0.05)(\%HAP)$$

Where,

Emission Point	EF(Spring only) (lb/spring)	Cr(3)	Cu	Ni	Mn
E-4	0.0035	1.05%	0.10%	0.40%	1%
F-4	0.0042	1.05%	0.10%	0.40%	1%
G-4	0.0042	1.05%	0.10%	0.40%	1%
H-4	0.0042	1.05%	0.10%	0.40%	1%
I-4	0.0042	1.05%	0.10%	0.40%	1%
A-4	0.0042	1.05%	0.10%	0.40%	1%
C-17	0.0042	1.05%	0.10%	0.40%	1%
C-18	0.0042	1.05%	0.10%	0.40%	1%
B-4	0.0042	1.05%	0.10%	0.40%	1%
D-4	0.0352	1.05%	0.10%	0.40%	1%

Emission Point	EF (Spring only) (lb/spring)	Cr(3)	Cu	Ni	Mn
D-5	0.0352	1.05%	0.10%	0.40%	1%
C-14	0.0042	1.05%	0.10%	0.40%	1%
C-15	0.0042	1.05%	0.10%	0.40%	1%
C-16	0.0042	1.05%	0.10%	0.40%	1%

**For the Chamfering Machines:**

$$PM = PM_{10} = (Springs)EF(1 - CE_{Baghouse})(1 - CE_{HEPA Filter})(0.05)$$

Where,

Process	Source	Line	EF	EF units
Chamfering	Spring	A, B, C, F, G, H, and I	9.03E-04	lb/spring
Chamfering	Spring	E	8.27E-04	lb/spring

$CE_{Baghouse} = 0.95$  for baghouses, unless stack testing indicates a different value.

$CE_{HEPA Filter} = 0.99$  for other filters, unless stack testing indicates a different value.

0.05 = Conversion of pounds to tons

$$HAP = (\%HAP)(PM)$$

Where,

HAP	Cr(3)	Cu	Ni	Mn
% of PM	1.05%	0.10%	0.40%	1%

**For Cooling Tower:**

$$PM = PM_{10} = \left(Flow Rate \frac{Gal}{hr}\right) \left(TDS \frac{lbPM}{gal}\right) (Total Liquid Drift\%)(0.05)$$

Where, Flow Rate = Flow Rate of the cooling tower

TDS = Total Dissolved Solids obtained from Louisville MSD Report

Total Liquid Drift (AP-42) = AP-42 emission factor for PM

0.05 = Conversion of pounds to tons

**For the Shot Peening and Blasting:**

$$PM =$$

$$\left( \text{Shot Throughput} \frac{\text{lb}}{\text{hr}} \right) \left( \frac{27 \text{lbPM}}{1000 \text{lb}} \right) (0.10) (\text{Operating hours}) \left( 1 - CE_{\frac{\text{Baghouse}}{\text{cartridge filter}}} \right) (1 - CE_{\text{Filter/HEPA}}) (0.05)$$

$PM_{10} =$

$$\left( \text{Shot Throughput} \frac{\text{lb}}{\text{hr}} \right) \left( \frac{13 \text{lbPM}}{1000 \text{lb}} \right) (0.10) (\text{Operating hours}) \left( 1 - CE_{\frac{\text{Baghouse}}{\text{cartridge filter}}} \right) (1 - CE_{\text{Filter/Hepa}}) (0.05)$$

Where, Shot Throughput = Shot throughput calculated by AP-42

$CE_{\text{Baghouse}} = 0.95$  for baghouses, unless stack testing indicates a different value.

$CE_{\text{Filter}} = 0.90$  for other filters, unless stack testing indicates a different value.

$CE_{\text{HEPA}} = 0.99$  for HEPA filters, unless stack testing indicates a different value.

OperatingHours = The sum of the daily operating hours for each piece of equipment

$(27 \text{lbPM}/1000 \text{ lb})(0.10)$  = AP-42, section 13.2.6 Abrasive Blasting using steel shot emission factor for PM

$(13 \text{lbPM}/1000 \text{ lb})(0.10)$  = AP-42, section 13.2.6 Abrasive Blasting using steel shot emission factor for  $PM_{10}$

0.05 = Conversion of pounds to tons

$$HAP = (\%HAP)(PM)$$

Where,

HAP	Cr(3)	Cu	Ni	Mn
% of PM	1.05%	0.10%	0.40%	1%

**For the Inspection Machines with sprayed paint:**

$$PM = \left( \frac{\text{Throughput}}{\text{month}} \right) (PM \text{ Content}) (0.05) (1 - CE_{\text{Filter}})$$

Where, Throughput = Gallons of coating used in each inspection machine.

PM Content = PM Density of the coating in lb/gallon.

$CE_{\text{Filter}} = 0.90$  for other filters, unless stack testing indicates a different value.

0.05 = Conversion of pounds to tons

**For the Inspection Machines and Loss Motion Assembly Paint Dauber:**

$$HAP = (Throughput)(HAP\ Content)(0.05)$$

Where, Throughput = Gallons of coating used in each inspection machine.  
 HAP Content = HAP Density of the coating in lb/gallon,  
 or %HAP \* Density of coating in lb/gallon.  
 0.05 = Conversion of pounds to tons

$$VOC = (Throughput)(VOC\ Content)(0.05)$$

Where, Throughput = Gallons of coating used in each inspection machine.  
 VOC Content = VOC Density of the coating in lb/gallon, or  
 % VOC \* Density of coating in lb/gallon.  
 0.05 = Conversion of pounds to tons

**For the Parts Washer:**

$$VOC = (Throughput)(VOC\ Content)(0.05)$$

Where, Throughput = Gallons of cleaner used in the parts washer.  
 VOC Content = VOC Density of the cleaner in lb/gallon, or  
 % VOC \* Density of cleaner in lb/gallon.  
 0.05 = Conversion of pounds to tons

**For the Hot Setting Machine:**

$$VOC = (Throughput)(VOC\ Content)(10\% \text{ loss})(0.05)$$

Where, Throughput = Gallons of quenching fluid used.  
 VOC Content = VOC Density of the fluid in lb/gallon, or  
 % VOC \* Density of fluid in lb/gallon.  
 0.05 = Conversion of pounds to tons

The PTE values given in Insignificant Activities Table may be used instead.

**For the Stress Relief Ovens:**

$$VOC = (Throughput)(VOC\ Content)(50\% \text{ loss})(0.05)$$

Where, Throughput = Gallons of oil coating.  
 VOC Content = VOC Density of the oil in lb/gallon, or  
 % VOC \* Density of oil in lb/gallon.  
 0.05 = Conversion of pounds to tons



The PTE values given in Insignificant Activities Table may be used instead.

**For the Spring Cleaning:**

$$VOC = (Throughput)(VOC\ Content)(50\%\ loss)(0.05)$$

Where, Throughput = Gallons of cleaner used.  
 VOC Content = VOC Density of the cleaner in lb/gallon, or % VOC \* Density of cleaner in lb/gallon.  
 0.05 = Conversion of pounds to tons

The PTE values given in Insignificant Activities Table may be used instead.

**For Natural Gas Combustion:**

$$PM = PM_{10} = (mmcf)EF(0.05)$$

Where, mmcf = millions of cubic feet of natural gas  
 EF = 0.52 lb/mmcf  
 0.05 = Conversion of pounds to tons

$$HAP = (mmcf)EF(0.05)$$

Where, mmcf = millions of cubic feet of natural gas  
 0.05 = Conversion of pounds to tons

HAP	EF (lb/mmcf)	HAP	EF (lb/mmcf)
2-Methylnaphthalene	2.40E-05	Formaldehyde	7.50E-02
3-Methylchloranthrene	1.80E-06	Hexane	1.80E+00
DMBA	1.60E-05	Indeno(1,2,3-cd)pyrene	1.80E-06
Acenaphthene	1.80E-06	Naphthalene	6.10E-04
Acenaphthylene	1.80E-06	Phenanathrene	1.70E-05
Anthracene	2.40E-06	Pyrene	5.00E-06
Benz(a)anthracene	1.80E-06	Toluene	3.40E-03
Benzene	2.10E-03	Arsenic	2.00E-04
Benzo(a)pyrene	1.20E-06	Beryllium	1.20E-05
Benzo(b)fluoranthene	1.80E-06	Cadmium	1.10E-03
Benzo(g,h,i)perylene	1.20E-06	Chromium	1.40E-03
Benzo(k)fluoranthene	1.80E-06	Cobalt	8.40E-05
Chrysene	1.80E-06	Lead	5.00E-04
Dibenzo(a,h)anthracene	1.20E-06	Manganese	3.80E-04
Dichlorobenzene	1.20E-03	Mercury	2.60E-04

HAP	EF (lb/mmcf)	HAP	EF (lb/mmcf)
Fluoranthene	3.00E-06	Nickel	2.10E-03
Fluorene	2.80E-06	Selenium	2.40E-05
		Total HAP	1.8856

**For GCN furnace in addition to Natural Gas combustion:**

Batch Processing Time:	8 hours	Max Batches per yr:	1095
Process Gas per Batch:	530 cubic feet per hour	hrs/yr:	8760
Uncontrolled Ammonia EF:	0.0000283 lb/ft <sup>3</sup> process gas (based on 350 ppm in process gas stream)		
Ammonia Control Efficiency:	90% (provided by pilot burner)		
NOx EF:	0.0000162 lb/ft <sup>3</sup> process gas (based on 200 ppm in process gas stream)		
At Maximum Capacity:			
Uncontrolled Ammonia Emissions:	131.39124 lb/yr/GCN		0.066 tpy/GNC
Controlled Ammonia Emissions:	13.14 lb/yr/GCN		0.007 tpy/GNC
NOx Emissions:	75.2 lb/yr/GCN		0.038 tpy/GNC

The PTE values given in Insignificant Activities Table may be used instead.